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Viktors Berstis

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**Claims Appendix***per 37 CFR §41.37(c)(1)(viii)***Clean Form of Amended Claims****Claim 1 (previously amended):**

A method of producing a two-dimensional sensor array for imaging, comprising the steps of:

determining a plurality of sensor positions, each position having a spacing in a first axis from a datum point according to a first non-uniform predictable deterministic distribution schema, and each position having a spacing in a second axis from said datum point according to a second predictable deterministic non-uniform distribution schema;

providing a two-dimensional array of sensors, each sensor being positioned on said array according to the determined positions in said first and second axes; and

providing a means for sampling said sensors such that a two-dimensional imaging sensor array having non-uniform sensor distribution is realized.

**Claim 2 (original):**

The method as set forth in Claim 1 wherein said first schema comprises a pseudo-random schema.

**Claim 3 (original):**

The method as set forth in Claim 1 wherein said first schema comprises a nonlinear polynomial schema.

**Claim 4 (original):**

The method as set forth in Claim 1 further comprising the step of assigning one or more reference identifiers to said first and second non-uniform distribution schema.

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## Claim 5 (original):

The method as set forth in Claim 1 wherein said second schema comprises a pseudo-random schema.

## Claim 6 (original):

The method as set forth in Claim 1 wherein said second schema comprises a nonlinear polynomial schema.

## Claim 7 (previously amended):

The method as set forth in Claim 1 further comprising the steps of:  
creating a dithered set of data samples by sampling said non-uniformly spaced sensors, said dithered set of data samples representing an image; and  
performing interpolation to synthesize a set of data samples representing uniformly spaced data samples from said dithered set of data samples, said uniformly spaced data samples representing said image according to uniformly distributed sensors.

## Claim 8 (original):

The method as set forth in Claim 7 wherein said step of performing interpolation to synthesize a set of data samples representing uniformly spaced data samples comprises performing linear interpolation.

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## Claim 9 (previously amended):

A computer readable medium encoded with software for creating a synthesized uniformly-spaced data set from a dithered data set in an imaging system, said software performing the steps of:

receiving a dithered set of data samples, said dithered set of data samples representing an image sampled by a plurality of sensors, wherein said sensors are positioned positions with a spacing in a first axis from a datum point according to a first non-uniform predictable deterministic distribution schema, and each sensor having a position spacing in a second axis from said datum point according to a second predictable deterministic non-uniform distribution schema; and

performing interpolation to synthesize a set of data samples representing uniformly spaced data samples from said dithered set of data samples, said uniformly spaced data samples representing said image according to uniformly distributed sensors.

## Claim 10 (original):

The computer readable medium as set forth in Claim 9 wherein said software for performing interpolation comprises software for performing linear interpolation.

## Claim 11 (original):

The computer readable medium as set forth in Claim 9 further comprising software for performing the step of receiving a reference identifier associated with distribution schema

of said dithered data set, and wherein said software for performing interpolation comprises software for performing interpolation based upon said distribution schema.

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## Claim 12 (previously amended):

A digital imaging system comprising:

a sensor array means, said sensor array having a set of sensors arranged in first axis in a non-uniform predictable deterministic manner according to a first schema and in a second axis in a non-uniform predictable deterministic manner according to a second schema;

a sampling means for sampling said sensors; and

a dithered data set creation means for storing data samples from said sampling

means.

## Claim 13 (original):

The digital imaging system as set forth in Claim 12 wherein said sensors of said sensor array means are arranged in said first axis according to a pseudo-random schema.

## Claim 14 (original):

The digital imaging system as set forth in Claim 12 wherein said sensors of said sensor array means are arranged in said first axis according to a nonlinear polynomial schema.

## Claim 15 (original):

The digital imaging system as set forth in Claim 12 wherein said sensors of said sensor array means are arranged in said second axis according to a pseudo-random schema.

## Claim 16 (original):

The digital imaging system as set forth in Claim 12 wherein said sensors of said sensor array means are arranged in said second axis according to a polynomial schema.

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## Claim 17 (original):

The digital imaging system as set forth in Claim 12 further comprising an interpolation means for synthesizing a uniformly-spaced data sample set from said dithered data sample set.

## Claim 18 (original):

The digital imaging system as set forth in Claim 18 wherein said interpolation means comprises a linear interpolation means.

## Claim 19 (original):

The digital imaging system as set forth in Claim 18 further comprising a means for receiving an reference identifier associated with said first and second distribution schema and selecting an interpolation means according to said first and second distribution schema.